

ABSTRACT OF THE DISCLOSURE

5 A system is provided for protecting a wavelength division  
multiplexing optical communications network against  
communication failures at the link, wavelength and fiber  
layers. The system includes failure detectors for detecting  
communication failures of the network and for generating  
failure signals in response thereto, and protection switching  
elements for receiving the failure signals and controlling the  
10 protection switching in response thereto. The system also  
includes a first set of intralayer communication channels  
within each of the link, wavelength and fiber layers for  
sending the failure signals between the failure detectors and  
the protection switching elements, and a second set of  
15 interlayer communication channels between adjacent ones of the  
link, wavelength and fiber layers for sending the failure  
signals between the failure detectors and the protection  
switching elements.

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